Safety Investigation Recommendations Follow-Up

Kirk Hudson
Ronda Wilkinson
Tony Nelson
Dan Garrison

July 6, 2021

No action requested – information only

P.U.D.
CHELAN COUNTY

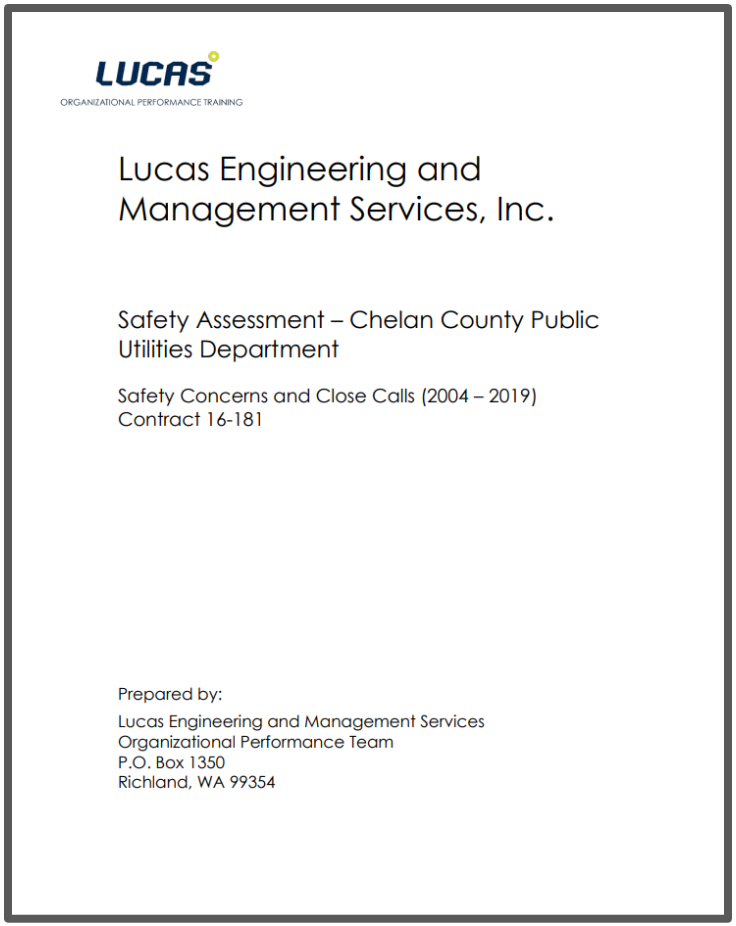
Initial Recommendation List

Number	Recommendation	Status
WDR1	~~Establish operating procedures for bridge and gantry crane lifts.~~	Complete
WDR2	Conduct an independent survey of assessment of the Safety Concerns and Close Calls program (awareness, use, follow through) (Ronda)	Ongoing
WDRC1	~~Develop a standard lift plan for moving fixed hoist gates with gantry cranes.~~	Complete
WDRC2	Revise District Safety Program requirements for gantry and bridge crane operations. (Response combined with WDR1)	Complete
WDRC3	~~Revise the Spillway OMI to include a procedure for operation of fixed hoist gates and actions to open the swing rails when lifting a fixed hoist gate.~~	Complete
WDRC4	~~Develop District Standard for what a good Pre-Task Plan (PTP) looks like~~	Complete
WDRC5	~~Implement PTP including metrics and adjustments as needed~~	Complete
WDRC6	Continue implementation of HPI tools (Ronda)	Ongoing
WDRC7	Develop and implement job planning requirements and standards to ensure that formal job planning is performed. (Tony)	Complete
WDRC8	~~Perform actions recommended in the Tetra Tech report to correct the design of the swing rails.~~ (Immediate actions complete)	Complete
WDRC9	Evaluate the practice of using working foreman (evaluation complete, actions underway) (Tony)	Complete
TTR1	Inspect spillway bays with swing rails (scheduled to coincide with operations) (Dan)	Ongoing (2 of 11 complete)
TTR2	~~Revise swing rail design~~	Complete
TTR3	~~Analyze interim modifications made to swing rails~~	Complete
TTRC1	~~Consider modifications to Crane 3 Block Leaders~~	Complete
TTRC2	~~Consider eliminating swing rails~~ (will be addressed as part of modernization project)	Transferred

Green indicates items **completed** since July 2020 update
Red indicates **changes** since July 2020 update

Independent Survey of Safety Concern and Close Call Program

Partnering with Lucas Engineering to perform another follow-up survey in late 2021



LUCAS
ORGANIZATIONAL PERFORMANCE TRAINING

Lucas Engineering and Management Services, Inc.

Safety Assessment – Chelan County Public Utilities Department

Safety Concerns and Close Calls (2004 – 2019)
Contract 16-181

Prepared by:

Lucas Engineering and Management Services
Organizational Performance Team
P.O. Box 1350
Richland, WA 99354

WDR2

P.U.D.
CHELAN COUNTY

Establish District Crane Standards & Program Requirements

- Standard
- Certification
- Qualification

WDRC2 & WDRC9

Human Performance Improvement

"Through continual learning, we constantly improve the defenses that protect us from the errors all of us can make."

Intended Outcomes:

- Engaged employees
- Reduction of significant incidents
- Improvement of processes

WDRC6

Human Performance Improvement

Advancing HPI by training employees on the practical application of additional error-reduction tools

Tool Implementation:

- STOP and Seek Out
- Step-by-Step
- TV-STAR
- Peer Check
- Place Keeping
- Daily Task Planning Board
- Pre-Task Plan
- Am-I-Ready
- Three-Way Communication
- Phonetic Alphabet
- First Check

WDRC6

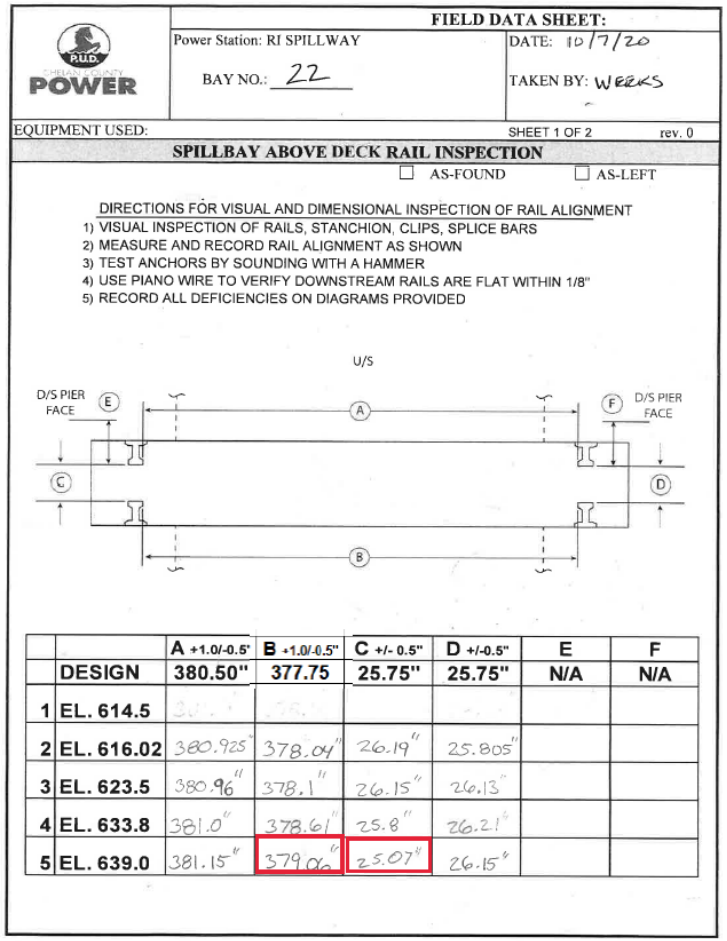
Job Planning and Standards

- Developed planning requirements depending on complexity and risk
- Training and Roll-out completed

WDRC7

Engineering Controls

Spillway bay inspections



FIELD DATA SHEET:

Power Station: RI SPILLWAY | DATE: 10/7/20

BAY NO.: 22 | TAKEN BY: WEEKS

EQUIPMENT USED: | SHEET 1 OF 2 | rev. 0

SPILLBAY ABOVE DECK RAIL INSPECTION

☐ AS-FOUND ☐ AS-LEFT

DIRECTIONS FOR VISUAL AND DIMENSIONAL INSPECTION OF RAIL ALIGNMENT

1) VISUAL INSPECTION OF RAILS, STANCHION, CLIPS, SPLICE BARS
2) MEASURE AND RECORD RAIL ALIGNMENT AS SHOWN
3) TEST ANCHORS BY SOUNDING WITH A HAMMER
4) USE PIANO WIRE TO VERIFY DOWNSTREAM RAILS ARE FLAT WITHIN 1/8"
5) RECORD ALL DEFICIENCIES ON DIAGRAMS PROVIDED

U/S

D/S PIER FACE (E) (A) (F) D/S PIER FACE (C) (D) (B)

		A +1.0/-0.5"	B +1.0/-0.5"	C +/- 0.5"	D +/-0.5"	E	F
	DESIGN	380.50"	377.75	25.75"	25.75"	N/A	N/A
1	EL. 614.5						
2	EL. 616.02	380.925"	378.04"	26.19"	25.805"		
3	EL. 623.5	380.96"	378.1"	26.15"	26.13"		
4	EL. 633.8	381.0"	378.61"	25.8"	26.21"		
5	EL. 639.0	381.15"	379.06"	25.07"	26.15"		

- 11 Spill bays with swing rails
- Inspect and document spill bay condition
- Make corrective repairs when needed
- 2 of 11 completed
- Scheduling 2 condition assessments per year until complete

TTR1

Summary


E 17 B
In memory of
Edward "Eddie" Bromiley.
Our friend, co-worker, teacher, and helper.
Gone but never forgotten.